

Dual-task induces significant alterations in the gait kinematics of older adults



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What we did differently:

Studied the effect of dual task on gait spatiotemporal and joint kinematics with a 3D kinematic analysis system (**outside the LAB**).

How we did it:

Observational study | 15 older adults (age 75.73±6.03)

Ten meter walk under a single- and dual-task conditions (memory and executive)

Ambulatory 3D kinematic analysis system | 7 inertial sensors

We saw significant differences between dual vs single task walk

Gait speed (p=0.000) | Cadence (p=0.000) | Swing (p=0.000) |

Stance times (p=0.001) | Double limb support time (p=0.004)

For the hip and knee in sagittal plan, joint velocity was significantly different between single- and dual-task conditions.



So what?

Use of body-worn sensors daily (mobile devices)

Gait speed as the sixth vital sign
Early & systematic detection of changes
prevention of falls.

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